

Amendments to the Claims:

Claims

1-10 (canceled).

11. (previously presented) A method for determining wear and tear in machines of a coal grinding mill, comprising:

determining an electrical draw comprising at least one of a voltage draw or a current draw of a first subsystem of a machine of the coal grinding mill during its operation;

determining wear and tear present in a second machine subsystem of the coal grinding mill based on the determined draw of the first subsystem; and

inferring a coal type or a coal quality of a coal being ground by the mill via the determined electrical draw.

12. (previously presented) The method according to Claim 11, wherein the wear determining step comprises, inferring the wear and tear in a unit of the second subsystem driven by the drive based on the determined draw of the drive.

13. (previously presented) The method according to Claim 12, wherein the determining step comprises, determining the draw on the drive of the first subsystem which is rigidly coupled via a transmitter comprising, at least one of a force transmitter or a torque transmitter, with the drive unit of the second subsystem.

14. (previously presented) The method according to Claim 12, wherein the draw determining step comprises, sampling at least one of a current or voltage signal of the machine with a frequency of between approx. 5 and approx. 20 kHz.

15. (previously presented) The method according to Claim 12, wherein the draw determining step comprises, determining at least one of instantaneous values, average values or a frequency spectrum of the signal of the first subsystem of the machine.

16. (previously presented) The method according to Claim 12, further comprising, acquiring further operating data about the first subsystem; determining the wear and tear in the second subsystem; and validating the data from the draw-determining step.

17. (previously presented) The method according to Claim 16, operating data acquiring step, further comprising, acquiring at least one of the load state, the speed, an operating temperature or an operating pressure.

18. (canceled)

19. (previously presented) A method for determining the operational effects in an industrial power plant coal grinding system having a plurality of interconnected systems, the method comprising:

determining an electrical draw comprising at least one of a voltage draw or a current draw of a first subsystem of the machine system during its operation;

determining operational effects in a second subsystem in the machine based on the determined draw in the first subsystem; and

inferring a coal type or a coal quality of a coal being processed via the determined electrical draw.

20.-27. (canceled)

28. (previously presented) A coal grinding machine comprising:
a drive;
a coal grinding mill driven by the drive;
a determining device that determines an electrical draw of at least one of a current or voltage draw of the drive during operation in communication with the drive;
an inferring device that infers wear and tear present in the coal grinding mill on the basis of electrical draw determined in the drive; and
a further inferring device that infers a coal type or a coal quality of a coal being processed via the determined electrical draw.

29. (previously presented) The coal grinding machine according to Claim 28, wherein the drive comprises a squirrel cage motor; and
the machine further comprises,
a shaft rigidly coupled with the motor and the coal grinding mill in a rotationally stiff manner without interposed elastic elements.

30. (previously presented) The coal grinding machine according to Claim 29, wherein the shaft comprises, a transmitter comprising at least one of a force transmitter or a torque transmitter, rigidly coupling the motor and coal grinding mill.

31. (canceled)

32. (previously presented) The coal grinding machine according to Claim 28, wherein the draw determining device further comprises, means for determining the frequency spectrum and average values and time signals in the drive, and
wherein the wear-inferring device further comprises, means for inferring wear in the coal grinding mill from trends in the frequency spectrum and in the variation in the average values and time signals determined by the draw determining device.

33. (previously presented) The coal grinding machine according to Claim 28, further comprising, means for deducing the current state of the coal grinding mill based on predetermined current states determined by the draw-determining device.

34. (canceled)

35. (canceled)

36. (previously presented) The coal grinding machine according to Claim 29, wherein the draw determining device comprises, a signal processing unit mounted directly on and in electrical connection with the motor of the drive.